

CHAPTER III

SESA SAMPLE SELECTION REVIEW

1. Introduction. Benefit QC samples of UI weeks paid are selected for investigation and verification once a week by the SESAs. The size of the sample is based upon the SESA's annual sample allocation and its quarterly and annual targets established by the Department.

Among their other field monitoring responsibilities, Regional Office QC staff will review periodically the SESA sample selection and assignment process. This will be done to ensure the integrity of SESA sampling, and to ensure that SESA weekly levels are in keeping with their respective annual targets. The findings of these reviews will be used in the annual determination of SESA administration of Quality Control, as detailed in Chapter VII.

2. QC Requirements. Quality Control methodology is intended to ensure the integrity of benefits QC data and sampling uniformity among the States. SESA sampling and case assignment must meet the following three requirements:

a. That the automated weekly sample selection has been performed correctly; i.e., that samples are representative of the survey population, are selected randomly, and include no extraneous cases (e.g. Interstate claims, work-sharing, etc.).

b. That all cases selected are assigned for investigation. This means that:

(1) each case in the weekly sample is assigned. (An exception is a case selected for the sample that should not have been included in the sampling frame, e.g., supplemental pay, extended benefit, etc. These cases should not be assigned for investigation.)

Note: Changes in the weekly sample size should be arranged in advance, in keeping with QC sampling methodology. See 3.a. below.

(2) only the cases that are selected will be assigned for investigation (i.e., no substitutions will be made).

c. That adequate sample levels are selected/assigned weekly to satisfy QC random sampling methodology and to meet the quarterly and annual allocations of each SESA.

3. Overview of the Weekly Sample Selection Process. Conducted by SESA personnel, the basic steps in the sampling process are:

a. Select the Weekly Sample. Each week the COBOL program will select a random sample of cases (often called the "hit file") from the weekly sampling frame, which is sorted by the amount paid (or offset or intercepted) and by Social Security number. This is done according to established QC methodology and is routinely the normal weekly sample that the SESA QC unit will investigate. (Ref.: ET Handbook No. 395, pages III-2 - 11.)

The QC supervisor may, on occasion, request in advance a smaller or increased sample to accommodate current staffing or other factors. Modified samples must be created by the COBOL program, not by deleting or adding cases after the sample is drawn. (Ref.: ET Handbook No. 395, page III-27.)

b. Create Sample Case Records. States are responsible for creating the Record Type 1 (ref: ET Handbook No. 395, pages III-38,39). In many States the Record Type 1 is downloaded via Sunlink from the SESA mainframe to the UI Artecon/Sun system.

In States that do not have downloading capability, Record Type 1 can be loaded via 9 track tape. Alternatively a hardcopy (printout) of Record Type One can be produced by the SESA's ADP staff. QC staff then manually enter the Record Type 1 data into the Artecon/Sun computer, thus establishing the new case file to be assigned.

c. Assign Cases. BQC sample cases can be assigned directly to BQC investigators, or to intermediate supervisors who then assign the cases to investigators. (For fuller detail on the entire case assignment process, see the UI-QC ADP Users' Guide, ET Handbook 400, Chapter IV, dated 2/93)

4. Review Process. Regional monitors are responsible for reviewing SESA QC sample selection and assignment. These reviews should be planned and carried out during each of the two required on-site SESA QC case review visits.

Procedures follow for handling each of the four tasks required:

a. Determine that all sample cases pulled weekly are assigned. In this first task, the monitor's goal is to determine that the same number of cases is assigned as the number pulled, and the cases assigned are the same as those pulled.

During each review, the monitor will need to obtain, for four weekly samples: a copy of both the printout of the "hit file" of sample cases selected by the BQC COBOL program from the SESA's

ADP unit and a printout of the cases assigned for that week. A user can obtain a report of cases assigned in a batch (or batch range) through the Database Management subsystem of the Desk

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Management menu option on the UIS Main Menu. Once the user selects Database Management System, a ring menu will appear. The user should highlight "Query-Language". A database listing will then be displayed. Select "UIDB" and select "NEW" on the ring menu. At this point the user can enter the script to produce the report.

If the user is working on the microcomputer in a State, the following query will produce the data for the report:

```
select mbatch, mseq, minv from b_master where mbatch between
(begin batch #) and (end batch #) order by mbatch, mseq
```

NOTE: enter the batch numbers without parentheses.

Type control left bracket (^[]) and highlight "Run". When the report is finished, it will be displayed on the screen. To print the report, highlight "Exit" and hit RETURN. Then choose "Output" and hit RETURN and highlight "Printer" and hit RETURN.

This report can also be produced in the Region using the script below:

```
select mbatch, mseq, minv from brx_master where x is the
specific region number, mstate matches ("State ID") and
mbatch between (begin batch #) and (end batch #) order by
mbatch, mseq
```

NOTE: Use " " around the State ID and do not enclose data with parentheses.

Type control left bracket (^[]) and choose "Run". When the report is finished, it will be displayed on the screen. To print the report, select "Exit", then "Output", and "New-file". The user will be asked to name the file. Use this format, "/tmp/(file name)" and select "Exit". Select "Exit" again and go to the shell using "!sh". Once in the shell, type, tptr and /tmp/(file name), and hit RETURN.

Enter control D (^D) and RETURN to return to the menu.

By comparing these documents, one can determine whether all cases selected in the sample were assigned. If for any batch fewer cases were assigned than pulled, the RO monitor should determine the reason for not assigning the cases. Unless the unassigned cases did not belong in the sampling frame, the RO monitor should point out that such actions are contrary to QC random sampling methodology, and must be avoided in the interest of SESA QC data

integrity. The monitor should also remind the QC Supervisor that if there is a need to assign fewer cases than were pulled in a given week, the Supervisor must call the National Office for approval and instructions on how to randomly select cases for elimination.

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The monitor can also determine whether cases were assigned which were not in the QC COBOL-pulled sample by comparing the "hit file" for a given weekly batch and the printout of cases assigned by the QC supervisor for that week. Any discrepancies should be probed with the QC supervisor to determine how and why such case substitution was made.

If the situation warrants, the monitor should offer technical assistance to ensure that the SESA will subsequently be able to follow proper sample selection and assignment procedures. Any discrepancies between samples selected and cases assigned should be reported to the National Office. Reporting procedures are described in section 5. below.

b. Determine that no errors occur which result in one or more incorrect records being downloaded to the Artecon/Sun computer through the rec1.dat file (Record Type 1). This determination regarding the accuracy of the creation of BQC Record Type 1 is to be made once each year. To make this determination, a monitor must request:

(1) a printout of the COBOL-generated "hit file", i.e., the weekly file of Type Three records originally pulled for the sample and

(2) a benefit history (printout) for each respective claim sampled, and compare these documents with

(3) the Record Type One file (rec1.dat) which was downloaded to the Artecon/Sun system either via Sunlink or 9 track tape.

This review is intended to make sure that following the COBOL sample selection, the computer program developed by the SESA always results in the downloading of the same claims as those included in the "hit file".

Once a year monitors should review a minimum of four weekly batches for each SESA. If a State's computerized sampling program is creating and downloading wrong Record Type One data (i.e., wrong cases/claims), it is important that this problem be detected early. Monitors are advised to check four or more consecutive weekly batches, arbitrarily chosen, when they conduct this review each year.

Another round of spot-checking will be needed whenever a State makes basic changes in its automated system which might affect the creation of the proper Type One records for the claims in the COBOL-selected weekly batches.

It is advisable for the RO monitor to request the QC unit, well in advance of the monitoring visit, to make arrangements for the

SESA to prepare the documents that will be needed (i.e., "hit files" and benefit histories of each claim to be verified) so that these will be available for the scheduled review. Some State ADP units may want at least a month's notice; others may need considerably more lead time, due to heavy work schedules.

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Generally, a printout of the Type One records of the claims in the batches being reviewed (the recl.dat file) can be provided by the QC supervisor. If this is not the case, these records (printouts) must be requested from the SESA ADP unit (also well in advance of the planned review).

For each sample claim, the essential data items that should be compared on the three documents are:

- SSN
- Batch #
- Key week ending date
- Amount paid, offset, or intercepted

If discrepancies are noted, monitors should promptly report them to the National Office. Monitors should confer with SESAs to learn why assignment discrepancies occur and may arrange for technical assistance from the National Office, if needed.

c. Determine the adequacy of sample levels investigated

(1) Reviewing Weekly Sample Levels. Regional Office monitors should review a SESA's sampling to determine if, on occasion, the State has dropped below its appropriate minimum weekly sample. The table which follows shows the normal, minimum, and maximum weekly sample sizes for various States (unidentified), based on their annual sample allocations.

<u># of</u> <u>Inves</u>	<u>Annual</u> <u>Sample</u>	<u>Weekly</u> <u>Min</u>	<u>Weekly</u> <u>Max</u>	<u>Qrtly</u> <u>Min</u>
4	480	6	12	120
5	600	8	15	150
6	720	9	18	180
7	840	11	21	210
8	960	12	24	240
9	1080	14	27	270
10	1200	15	30	300
11	1320	17	33	330
12	1440	18	36	360
13	1560	20	39	390
14	1680	21	42	420
15	1800	23	45	450

Summary sample selection reports (QC-5A, 5B, and 5C) generated by the Regional QC staff will assist them in reviewing a SESA's weekly sampling levels. A sample copy of these reports, dated October 29, 1990, is presented in Appendix C-1. These reports

should be run by the Regions every few weeks. Regional monitors can generate these reports for all States or selected States in their Region.

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Summary report QC-5B (Appendix C-1) shows the number of cases pulled each week during the "current quarter" * by State and batch. The weekly sample average for the current quarter is reported in column 2 for each State. The number of weeks in which a given State has dropped below its allowed minimum weekly sample size is reported in column 5. (In the period covered by this report, none of the States had fallen below their weekly minimum levels.)

Using this report, monitors will be able to spot those States which have dropped below their weekly minimum pulls. They should determine, in these situations, if there is a problem which calls for special Regional Office attention and point out that below-minimum samples may decrease the precision of estimated error rates. States which pull below-minimum samples may not have a sufficient number of cases to analyze types and causes of errors, or analyze population subgroups. Regional Office monitors should describe any technical assistance planned or offered to the SESA in the quarterly Regional QC reports prepared for the National Office.

Note: Each QC-5 report will include data through the most recent batch residing in the National Office database. However, comparison reports for all States and batches may not be picked up during automated pick-up. Whenever the QC-5B report shows missing comparison reports, this does not mean that these States have failed to pull samples for these batches. The Regional Offices do not need to contact States about missing comparison reports. These reports will be picked up by the National Office at a later date.

(2) Monitoring Annual Sample Levels. Monitors need to be mindful of average sampling levels over the year to determine whether or not the SESAs are pulling samples large enough to satisfy their annual sampling goals. For example, a State with an annual allocation of 600 cases needs to maintain a weekly sample average of 12 cases. A 1500 annual allocation requires an average weekly selection of 30 cases.

The example of report QC-5A in Appendix C-1 shows (in col. 8) that at the end of the first two quarters of 1990, only one SESA (Arizona) was sampling at a rate well below its respective annual sampling target (column 7). Seven other SESAs show nominal sampling shortfalls of fewer than 30 cases (col. 7 figures minus col. 4 figures equal col. 8 figures).

Used throughout the year, the QC-5 reports should be useful to Regional Office monitors in identifying States that are sampling at an annual rate insufficient to meet their annual targets.

*"Current quarter" is the latest quarter (partial or complete) covered in the reports.

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Monitors will need to concentrate their attention upon these States. If there are problems which are likely to impair a State's sampling or investigative capacity for an extended period, the monitor must determine whether or not the Region can provide technical assistance to enable the SESA to increase its weekly sampling levels and thus ensure meeting its annual target. Monitors should report their findings to the National Office quarterly. (See section 5. below regarding reporting.)

d. Determine that the automated weekly sampling has been performed properly, without significant exceptions. This fourth review requirement covers three other aspects of SESA random sampling: (1) ensuring the representativeness of each weekly sample, (2) avoiding inclusion of any extraneous cases in the sample, and (3) ensuring inclusion of all appropriate claims in the each weekly population (sampling frame).

Examples of these common sampling exceptions that may occur in SESA sampling routines are detailed below.

(1) Reviewing QC samples for representativeness. The BQC COBOL program produces a file of aggregate sample and population data for selected demographic characteristics. This file (sf.sum) is downloaded to the Artecon/Sun system either via Sunlink or 9 track tape. The SESA can then run the Sample Validation and Sample Characteristics reports through the BQC software.

(2) Accuracy of BQC Sampling Frames. Based upon these sample and population data, the Regional Offices and the National Office can run reports by quarter to identify exceptions in State BQC sampling frames.

An example of fairly common exceptions which the Regions need to investigate whenever they occur is presented in Appendix C-2. This example is borrowed from a typical QC Sample and Population Exceptions Report, run October 29, 1990, by the National Office. Such reports are distributed to the Regional Offices periodically to facilitate investigation of sampling variations or exceptions among the SESAs.

Regional Offices can now generate these reports for all or selected States in their Region.

In Appendix C-2, two typical sampling exceptions are cited. The first, depicted in parts 1 and 2, pertains to variations from week to week in UI population weeks and benefits paid that are

outside the control limits. In this situation, the QC population (sampling frame) is checked to flag UI weeks or dollars paid that are unusually large or small. UI weeks and dollars paid in each weekly batch are compared with control limits, which are based upon the mean (average) and standard deviation of the State's population for the 52 batches prior to the beginning of the quarter for which the report is run. The statistical control limits are set at the mean plus and minus three times the

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standard deviation. If the population batch is above the upper control limit or below the lower control limit, it is flagged with an asterisk (*), as an exception for Regional Office investigation to determine the cause for the high or low population figure.

Part 1 of C-2 is a summary of significant exceptions by Region of UI population weeks and benefits paid for a specified group of sampling batches. Part 2 consists of excerpts from an exception report for UI QC population weeks and dollars paid during the same period, the 3rd quarter of 1990.

Part 3 of Appendix C-2 presents a second type of sampling frame exception to be investigated by the Regions. This is a report prepared quarterly to compare the SESA BQC population with the State's ETA 5159 report, adjusted to exclude interstate payments. Discrepancies between the two sets of population data which fall outside of the statistical control limits warrant further investigation by the ROs. Such discrepancies are flagged (*) in these reports.

Such exceptions need to be investigated by Regional monitors, as part of SESA sampling reviews, whenever they show up. Monitors should review any such exceptions with appropriate State QC personnel and, if necessary, ADP unit staff. From this inquiry, monitors will provide the National Office the following information:

- (a) an explanation of the exception(s) reviewed;
- (b) information on what has been done by SESA staff to correct the problem; and
- (c) a statement regarding any technical help that is needed from the National Office.

This information should be furnished to the National Office, along with other SESA sample selection review findings, following the guidance presented in section 5. below.

Regional monitors can generate the Comparison Report for Population UI Benefits Paid for all or selected States in their Region. The report can be run quarterly or annually.

(3) Extraneous Cases in the Sample. If, on occasion, a SESA reports inclusion of extraneous cases in its weekly samples (e.g., EBs or interstate claims, etc.), the SESA should call the National Office hotline. If the National Office agrees that the case does not belong in the BQC sample, the NO will enter a code (9) in field c1 of the b_master table. These cases will be listed on the Regional Sample Selection Report. The Regional monitor should determine why it is happening, encourage the SESA to correct the situation, and document the SESA file appropriately. The monitor will also report the result to the National Office.

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(4) Inclusion of all appropriate claims in each weekly population -- including varying key week ending dates in some weekly QC samples. The computer program used to select weekly QC samples is designed to draw potentially from all types of claims included in the weekly population. On occasion, a few SESAs have discovered that in one or more successive samples all cases pulled had the same key week ending date. With some back-dated claims and possibly appeals reversals to be found in each weekly sampling frame, and the inclusion of two benefit weeks due to bi-weekly certification by many SESAs, the probability of selecting a sample with all cases having the same key week ending date is very small. Whenever such sampling aberrations have been probed, they were found to be due to changes made to the QC software by SESA programmers, resulting in the building of transaction files of only current claimed weeks.

Regional Office QC monitors should urge State QC supervisors to check periodically their database (KW ending dates and UI program codes) using Informix SQL or SPSS software available on the Artecon/Sun system to detect possible deviations from QC sampling methodology.

In their sampling reviews, Regional monitors also review at least one weekly sample to check for varying key week ending dates. If none occur the monitor should ask to look at prior weekly samples (three or more) to ensure that varying weeks are not excluded by the sample selection program.

Regional monitors should also check to see that the State is pulling combined wage claims (CWCs) and Federal UI program cases (i.e., UCFE and UCX) in its samples. It is not uncommon that major differences in population weeks and dollars are caused by the dropping of one or another of these claimant groups from the QC sampling frame. These cases can be verified by looking at the codes in fields c1 (Program Code) and c2 (CWC Indicator) of the b_master table.

5. Reporting SESA Sampling Review Findings. Monitors should report the findings of each sample selection review, and miscellaneous investigations of sampling exceptions, in quarterly Regional QC reports to the National Office. A reporting worksheet (QC-5) is provided for this purpose.

a. Worksheet. A facsimile of the QC-5 - Sample Selection, Assignment and Exceptions Review worksheet is presented on the following page.

b. Worksheet Instructions. Worksheet QC-5 - Sample Selection, Assignment and Exceptions Review is to be used for recording the findings of SESA sample selection review. The worksheet can be used to report a summary of these findings to the National Office in both quarterly and annual comprehensive SESA reports. (See sec. 5.c. below.)

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c. Worksheet. Facsimile of the sample selection review worksheet (QC-5)

WORKSHEET QC-5	
<u>SAMPLE SELECTION, ASSIGNMENT, AND EXCEPTIONS REVIEW</u>	
State _____	Review Date _____
<u>Type of Review</u> : Progress ____ (Quarterly) Final ____	
Reviewer _____	Batches: # _____

<p>I. QUESTIONS.</p> <p>A. <u>Sample Selection and Assignment</u></p> <p>1. In each sample, was the <u>number of cases</u> assigned the same as the number pulled? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. In all samples reviewed, were the cases assigned <u>the same</u> as those pulled? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. In each batch checked, were the cases in the Record Type One file (recl.dat) the same as those pulled by the BQC Cobol program? <input type="checkbox"/> Yes <input type="checkbox"/> NO</p> <p>B. <u>Adequacy of Sample Levels</u></p> <p>1. Did this State, in one or more weeks, fall below the minimum weekly sample? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Based on the projected annual sample size in the QC-5 Report, is this State likely to meet its annual sample allocation in the calendar year? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>C. <u>Sample/Population Exceptions</u></p> <p>1. Has the State experienced exceptions which affect <u>representativeness</u> in its weekly samples? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Has the SESA experienced any samples which included one or more <u>extraneous cases</u>? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Has one or more weekly batches picked the same key week ending date for all cases, or provided other data suggesting <u>exclusion of appropriate types of claims</u> from weekly sampling frame(s), for example: CWCs, UCFEs, UCXs? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4. Has the BQC population UI weeks or dollars paid fallen outside of the control limits for any batch? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, list batches. _____</p> <p>5. Does the BQC population benefits paid for the quarter fall outside of the control limits in comparison with the ETA 5159 Report? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>II. EXPLANATION (Describe problems or sampling exceptions SESA has experienced in sample selection or assignment, if any; detail efforts (TA or corrective action) undertaken to remedy these situations.) _____</p> <p>_____</p> <p>_____</p> <p>_____</p>	

(1) Header. Provide information requested.

- o Type of Review - Check item appropriate to the period covered.
- o Batches - Indicate batches covered by the review.

Other items in the header are self-explanatory.

(2) Questions. The questions in section I of the QC-5 parallel the procedures for reviewing the three aspects of sample selection presented in section 4. a., b., and c. above. Check "yes" or "no", as appropriate for each question in accordance with the findings of the review. Any discrepancies found in the SESA's sampling practices should be described and explained in section II of the worksheet.

(3) Explanation. Use section II to detail any sampling discrepancies that are found. Give reasons for the sampling practices that are at variance with established QC methodology. Also describe efforts to provide TA to the SESA involved, and to assess any corrective action measures taken by the SESA, as needed.

d. Transmitting Sampling Review Reports. The findings of the sampling review should be summarized in the quarterly comprehensive Regional QC reports (on each SESA) for the National Office. (See Chapter VIII, section 4. for more detail on Regional Office QC reporting to the National Office.)

6. Review Schedule. Regional monitors are responsible for progress reviews of SESA QC sample selection, assignment, and exceptions. These reviews should be planned and carried out during regular on-site SESA QC monitoring trips.